



State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

November 1, 2006

CERTIFIED RETURN RECEIPT
7004 2510 0004 1824 4196

Western Rock Products
Attn: Bob Roth
820 North 1080 East
St. George, Utah 84770

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, Western Rock Products, Nichols Pit, M/021/039, Task ID# 463, Iron County, Utah

Dear Mr. Roth:

The Division has completed our review of your draft Notice of Intention to Commence Large Mining Operations for the Nichols Pit, located in Iron County, Utah, which was received August 16, 2006. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion and **address only those items requested in the attached technical review** by sending replacement pages of the original mining notice **using redline and strikeout text**. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records. Please provide a response to this review by December 1, 2006.

The Division will suspend further review of the Nichols Pit Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

SMW:dj:pb
Attachment: Review
P:\GROUPS\MINERALS\WP\M021-Iron\M0210039-WesternRock\final\10302006-initialREV.doc

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

**Western Rock Products
Nichols Pit**

**M/021/039
October 30, 2006**

R647-4-105 - Maps, Drawings & Photographs

105.1 Surface facilities map

A surface facilities map should be furnished at a scale of 1"=100' in order to document the equipment located on the site. This map should also show product piles, soil piles, waste dumps, and crusher fines storage areas and other items that may exist on the site. (DJ)

105.2 Drawings or Cross Sections (slopes, roads, pads, etc.)

The plan should contain at least two cross section, one north south and one east west through the heart of the pit. These cross sections should show the surface before mining, after mining and after reclamation. (DJ)

A reclamation treatments map should be furnished. This map should show areas of the site to receive various reclamation treatments shaded, cross-hatched, or color coded to identify which reclamation treatments will be applied. Area should include: buildings, stationary mining/processing equipment, roads, utilities, proposed drainage improvements or reconstruction, waste dumps, disposal areas for overburden. Reclamation treatments may include ripping, regrading, replacing soil, fertilizing, mulching, broadcast seeding, drill seeding and hydroseeding. (DJ)

A contour map should be included that shows the final slopes of the pit at the completion of the five year mining campaign. (DJ)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.

The plan proposes to work with DOGM near the end of mining operation to review final reclamation. In order to calculate a surety for this application, a reclamation plan needs to be written for the plan as submitted. (DJ)

All materials not used in the operation are to be stored for future reclamation. Please show on the surface facilities map where this material will be stored. (DJ)

106.3 Estimated acreages disturbed, reclaimed, annually.

This portion of the application indicates that there is 15.6 acres of mining and an area where crusher fines are stored. The area where the crusher fines are located needs to be

included in the application. All areas affected by this operation needs to be included in the application. (DJ)

The plan indicates that 100,000 cu yds of crusher fines will be created annually. For the duration of the first five year plan, the area to be impacted by this material will be much greater than the area presently shown. The permittee should allow for sufficient area to store this material and include in the plan the final disposition of this stockpile. (DJ)

106.5 Existing soil types, location, amount

Two soil types were identified in the soil survey data submitted. Topsoil depth between these two types ranged from 11 to 20 inches. Was any of this material salvaged during past mining operations? Is any of the original soil still available for reclamation? Are there areas that were not disturbed by past mining where the soil could be salvaged? (LK)

The plan indicates that crusher fines will be used as a plant growth material. Before this is done, an analysis needs to be done to determine if this material is suitable, and what, if any amendments may be needed to support revegetation efforts. The following parameters need to be included in the analysis:

- | | |
|---------------------------|-----------------------------------|
| 1. Texture | 6. CEC (cation exchange capacity) |
| 2. pH | 7. Total nitrogen |
| 3. EC (conductivity) | 8. Nitrate nitrogen |
| 4. SAR | 9. Phosphorus (as P_2O_5) |
| 5. Percent Organic Matter | 10. Potassium (as K_2O) |

This analysis needs to be done now to demonstrate that this material would be a suitable plant growth material, and again just prior to reclamation to determine what, if any amendments may be necessary. (LK)

106.6 Plan for protecting & redepositing soils

Before using fines for reclamation, the analysis requested under R647-4-106.5 needs to be provided. Assuming the material is suitable, please describe measures used to protect stockpiled fines until they are used for reclamation. (LK)

The plan for redepositing the crusher fines back over the affected area will be by using a dozer and a loader. The majority of this material will need to be transported more than 200' which will make the use of a dozer and loader uneconomical. The Division suggests that the permittee consider the use of a loader and several trucks to transport this material to the areas where it will be applied. (DJ)

The plan proposes to replace 3 inches of crusher fines over the operations areas during reclamation. Because of the large amount of material available for this purpose, and assuming the fines are suitable growth medium, the permittee should consider replacing fines at a greater depth. The Division suggests a minimum of 12 inches of fines be

placed over previously back-filled areas, and a minimum of 24 inches over other disturbed areas. (DJ & LK))

106.7 Existing vegetation - species and amount

The plan refers to the soil survey for vegetation information. The limited information in the soil survey is either not accurate or is incomplete. For example: Pinyon and juniper are not listed as species for the Pinyon/Juniper community. The Species list provided is only common species for a 'potential' community, not a list of species that existed prior to mining, or currently exists in the surrounding undisturbed areas. Percent ground cover of living vegetation is not reported. Please provide the results of a vegetation survey that, at a minimum, provides the percent vegetation cover and the species that exist (or presumed to have existed) on site. (LK)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

107.1.12 Disposal of trash, scrap, debris

Please describe how and where trash and debris will be disposed of. (LK)

107.2 Drainages to minimize damage

The plan states the pit is designed not to have any runoff of storm water. Please state in the plan how the pit has been designed to prevent runoff. (DJ)

107.3 Deleterious material safely stored or removed

The plan states no deleterious material will be left on the site after crushing operations have ceased for the year. The plan needs to include detail on how these materials will be stored at the site during the crushing operation. (DJ)

107.5 Suitable soils removed & stored

The plan indicates the Western Rock will salvage and stockpile all soil, overburden and crusher fines material. At the end of each mining/crushing campaign at the site, these piles should be seeded or otherwise stabilized to help prevent erosion and help to prevent a weed invasion. Please note, all soil materials to be used for reclamation should be analyzed for the parameters listed under R647-4-106.5. Also, show on a map the location of all stockpiled soils, overburden and fines. (DJ & LK)

R647-4-109 - Impact Assessment

109.2 Impacts to threatened & endangered wildlife/habitat

The letter from Wildlife Resources does not state that there will be no impacts to wildlife habitat, only that there are not threatened or endangered species. In fact, the letter does identify the area as 'high priority' deer winter habitat. Please provide a discussion of the impacts to wildlife habitat and a plan to mitigate the impacts. (LK)

- 109.3 Impacts on existing soils resources
The letter from Wildlife Resources does not address impact to the soil resources. Please provide a discussion of the impacts to the soil resources and plans to mitigate these impacts. (LK)
- 109.4 Slope stability, erosion control, air quality (fugitive dust control plan), public safety
The highwall slope to remain will be at a grade suitable to eliminate any hazard to people.....
Please state in the plan what this final slope angle will be. (DJ)
- 109.5 Actions to mitigate any impacts
Please provide plans to mitigate the impacts caused by mining as discussed under -109.2, -109.3, and -109.4. (LK)

R647-4-110 - Reclamation Plan

- 110.1 Current & post mining land use
Land use information is identified in two places, on page 11, current land use is identified as 'raw land, former land fill' and the post mining land use is identified as 'possible housing development'. On the second page of the 'Proposed Reclamation Plan for the Nicholes Pit', the primary post mine land use is stated as upland shallow loam and mountain or foothills. Upland shallow loam is a soil type and mountain or foothills are geographic descriptions, not land uses. The letter from Wildlife Resources identifies the area as high priority winter range for deer (wildlife habitat), this should be included in the current as well as post mining land uses. Livestock grazing and recreation may also be considered as important elements of the current and post mining land use as well. Before the Division can approve an alternative land use (housing development), all necessary permits from local government agencies (i.e. plat/subdivision plans, building permits, etc.) for this use must be obtained. Please provide an accurate description of the current and post mining land use(s). (LK)
- 110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
The submittal should show what reclamation treatments will be applied to the highwalls. The plan presently shows that highwall treatments are N/A. In viewing the five year plan, highwalls will be formed along the north portion of the planned pit, therefore treatment should be described in the plan. (DJ)
- The plan states that all slopes from the mining operation will be left at a gradual slope or more.
Please state the final slope angle that slopes within the mine will be left at, a description of gradual is not sufficient. (DJ)
- 110.3 Description of facilities to be left (post mining use)
The plan should indicate whether any facilities would be left after final reclamation. (DJ)

- 110.4 Description or treatment/disposition of deleterious or acid forming material
Please refer to comments under R647-4-107.4 (LK)
- 110.5 Revegetation planting program
Current plans are to rip all stockpile and processing areas to a depth of 18 inches.
The Division recommends that all areas where compaction has occurred be ripped to a minimum depth of 24 inches to remove compaction. (DJ)

Please provide a revegetation plan for the disturbed areas. If different treatments will be used on selected areas, then these areas (and treatments) need to be identified on a reclamation map. At a minimum, the revegetation plan needs to define topsoil (plant growth material) replacement, including depth(s) to be replaced; amendments to be added (as needed - based on current soil analysis of plant growth materials); seedbed preparation, a list of species to be seeded, including rate of application as lbs/acre of pure live seed; seeding method(s) to be employed; timing - late fall is generally best time for seeding; and weed control measures (if needed). Species selection for revegetation should be based on their need/utility for the post mining land use. When possible, the use of native species is encouraged. Note, there is no commitment to use the seed mix that is in the plan as a recommendation. If this is indeed the seed mix to be used, it needs to be revised (it contains high seeding rates of competitive introduced species, the seeding rate is not identified in terms of pure live seed). (LK)

R647-4-111 - Reclamation Practices

- 111.13 Revegetation
The 'Reclamation Practices' cannot be evaluated until a reclamation plan is provided.

R647-4-112 - Variance

No variances were requested. (DJ)

R647-4-113 - Surety

Surety calculations for this plan needs to be included in the reply to this review. (DJ)